

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

RAGIL et al.

Examiner: Tam M. Nguyen

Serial No.: 10/042,248

Group Art Unit: 1764

Filed: January 11, 2002

Title: HIGH OCTANE NUMBER GASOLINES AND THEIR PRODUCTION USING
A PROCESS ASSOCIATING HYDROISOMERIZATION AND SEPARATION

PRE APPEAL BRIEF REQUEST FOR REVIEW

Further to the Final Office Action dated January 3, 2007, and the interview held on April 23, 2007, for which applicants thank the Examiner, and concurrently with the filing of the attached Notice of Appeal, applicants request the pre appeal brief review of the rejections.

Issue 1 – The Rejection Under 35 USC § 112, first paragraph

All the independent claims, i.e., claims 6, 7, 38 and 39, recite that the “feed is a fresh feed not previously treated so as to separate di-branched and tri-branched paraffins therefrom.”

Said recitation is rejected as allegedly not complying with the written description requirement without providing any reason as to why the description is not adequate in reasonably conveying to one of ordinary skill in the art that applicants had possession of the claimed invention.

The law is clear and well settled in that literal support for claim language is not required. See, for example, *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976), holding that adequate description under the first paragraph of 35 U.S.C. 112 does not require *literal* support for the claimed invention. The *Wertheim* court stated that

If lack of literal support alone were enough to support a rejection under § 112, then the statement ... that “the invention claimed does not have to be described in *ipsis verbis* in order to satisfy the description requirement of § 112,” is empty verbiage. (Emphasis added.) (Internal citations omitted.)

The correct analysis was set forth in *Eiselstein v. Frank*, 34 USPQ2d 1467 (Fed. Cir. 1995), holding that

The test is whether the disclosure of the application relied upon **reasonably conveys** to a person skilled in the art that the inventor **had possession of the claimed subject matter**. (Emphasis added.) (Internal citations omitted.)

Likewise in the present case, no literal support for the claim language at issue is present. However, applicants submit that the claimed concept is present in the original disclosure, and such is how one of ordinary skill in the art would understand the description of the invention.

For example, the following language is present in the specification (citations are to the paragraph numbers appearing in the published application, i.e., in US 2002/0175109):

[0030] It [the feed] is **mainly composed of** straight-chain, mono-branched **and multi-branched paraffins**, naphthenic compounds such as dimethylcyclopentanes, aromatic compounds such as benzene or toluene and possibly olefinic compounds. The term "multi-branched paraffins" includes all paraffins with a degree of branching of two or more.

...

[0045] In variation 2.1a (FIG. 2.1A), **fresh feed** (stream 1) **containing** straight-chain, mono-branched **and multi-branched paraffins**, also naphthenic compounds and aromatic compounds, is mixed with a recycle of straight-chain paraffins from the separation section 4 (stream 10).

...

[0046] In variation 2.1b (FIG. 2.1B), **fresh feed** (stream 1) **containing** straight-chain, mono-branched **and multi-branched paraffins**, naphthenes and aromatic compounds, is mixed with stream 14 from hydro-isomerisation section 3, then the resulting mixture 23 is sent to separation section 4.

...

[0055] The **fresh feed** (stream 1, FIG. 2.2A) **containing** straight-chain, mono-branched and **multi-branched paraffins**, naphthenic compounds and aromatic compounds, is mixed with an effluent 9 which is rich in straight-chain paraffins from separation section 4, then the resulting mixture 33 is sent to hydro-isomerisation section 2 which converts a portion of the straight-chain paraffins to mono-branched paraffins and a portion of the mono-branched paraffins to multi-branched paraffins. (Emphasis added.)

To one of ordinary skill in the art reading the application, notably the cited material above, would be reasonably conveyed the claimed concept that applicants' invention is directed to a process wherein the feed is a fresh feed not previously treated so as to separate di-branched and tri-branched paraffins therefrom.

For example, the feed in paragraph 30 is described to be mainly composed of various

components among which multi-branched paraffins, e.g., di-branched and tri-branched paraffins, appear. Likewise, paragraphs 45, 46 and 55 describe a fresh feed that contains various components among which multi-branched paraffins appear. One of ordinary skill in the art would understand the description of these feeds to refer to feeds which have not undergone a process step where the di-branched and tri-branched paraffins were removed (pretreatment step hereinafter). If such a pretreatment step would be within the possibilities for the feed prior to being subjected to the remainder of the claimed process, the feed would not have been described as being mainly composed of, e.g., multi-branched paraffins among other components, or as a fresh feed containing multi-branched paraffins.

Further reasons for why one of ordinary skill in the art would have understood the feeds of the claimed invention based on the description of the application to not undergo a pretreatment step are provided in an expert Declaration under 37 CFR 1.132 by Dr. Slavik Kasztelan which was filed with the Reply dated October 16, 2006.

The Declaration sets forth, e.g., that there is no indication of any separation of multi-branched species prior to the feed passing to an isomerization step, and one page 16, line 23, there is the specific statement that “fresh” feed is employed. Furthermore, the Declaration explains in detail that the nature of the feed described on pages 12 and 13 of the application, including hydrocracking naphthas and cuts from atmospheric distillation as well as light reformats as noted in the last example of the specification, would include straight chain, mono branched, di-branched and tri-branched paraffins including at least C7 paraffins. The declaration also states that it is clear from the specification including the description of Figure 1-A that fresh feeds have not been treated so as to remove the di-branched and tri-branched paraffins. Instead, the specification reasonably conveys that the entire feed is passed to the claimed process.

Moreover, the burden is on the PTO to establish, i.e., give reasons, why the application’s description does not satisfy the written description requirement. See, e.g., *Wertheim*, stating that

The burden of showing that the claimed invention is not described in the specification rests on the PTO in the first instance, and it is up to the PTO to give reasons why a description not in ipsius verbis is insufficient. (Emphasis added.)

In the present case no reasons were provided for the rejection, but merely allegations were made that the specification does not reasonably convey to one of ordinary skill in the art the

claimed concept. Nowhere does the Office Action explain why and how the specification fails to reasonably convey the claimed process. As such, the USPTO has not met its burden of establishing compliance with the written description requirement of 35 USC 112, first paragraph.

Issue 2 – The Rejection Under 35 USC § 103

The claims are rejected as allegedly unpatentable over Stem, US 4,982,048.

Stem teaches an invention where the process specifically has as its objective the pretreatment of the feed prior to sending it to the remaining process steps. In this regard, see the following matter appearing in the description of Stem:

This invention relates to a process which ultimately enhances the octane of a refinery gasoline blending pool. The octane is increased by the use of a **select feed pretreatment** preceding isomerization. This select pretreatment enables the segregation of said feed into a portion which is increased in value by isomerization from that portion which would be diminished in value by isomerization. (See column 1, lines 9-16.)

...

A means to accomplish this goal is to formulate and develop an ideal **pre-isomerization separation step** using a multiple number of different shape selective molecular sieves. (See column 1, lines 54-59.)

...

Object of this invention is to provide a unique multiple separatory sieve sequence to **pretreat** an isomerization zone feed stream **to preserve** (before isomerization) constituents within said feed, such as aromatics, naphthenes, and **di-branched paraffins**, which would be diminished in value if they were passed to isomerization. (See column 3, lines 60-66.)

...

Object of this invention is to provide a unique isomerization process whereby a **feed stream** to an isomerization zone will contain both normal and mono-methyl-branched paraffins but **essentially exclude multi-branched paraffins**, cyclic paraffins and aromatics ... (See column 3, lines 67 to column 4, line 3.)

...

One of the advantageous aspects of this invention is the fact that **di-methyl-branched paraffins**, cyclic paraffins and aromatics are **not passed to the isomerization zone.** (See column 9, line 54-57.) (Emphasis added.)

It is clear that an objective the invention of Stem is to preserve multi-branched paraffins from cracking during isomerization, and that all embodiments taught therein include a pretreatment step to achieve said objective, in which pretreatment said multi-branched paraffins

are removed and not passed to isomerization and to the rest of the process steps.

Thus, the teachings of Stem are directly contrary to the claimed invention which recites that feed is a fresh feed not previously treated so as to separate di-branched and tri-branched paraffins therefrom.” Nothing in Stem would lead one of ordinary skill in the art to modify the process therein to achieve the claimed process. As such, there is no obviousness.

The Office Action alleges that the primary purpose of Stem is to isomerize only the normal paraffins, and therefore, one would omit the pre-treating steps when the feed comprises primarily normal paraffins.

However, all the independent claims of the present application recite that the “**feed** [is] constituted by a C5 to C8 cut or fraction thereof **containing** straight chain, mono-branched, **di-branched and tri-branched paraffins** and including at least C7 paraffins.” (Emphasis added.) Thus, a feed not containing di-branched and tri-branched paraffins is not a feed according to the invention.

Moreover, Stem teaches that

In order to take full advantage of the highlights of this invention, the **feed material should contain an amount of di-branched paraffinic hydrocarbons** which ar[e] known for their high octane value worthy of separation. (See column 5, lines 51-55.) (Emphasis added.)

Thus, one of ordinary skill in the art would use the process of stem with feeds that do contain di-branched paraffins, and thus, would not contemplate using the same with feeds comprising primarily normal paraffins.

Reconsideration of all the rejections is respectfully and courteously requested.

Respectfully submitted,

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